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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,686	12/15/2000	Douglas E. Crafts	42390P10312	9954

7590

09/08/2003

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EXAMINER

LE, THANH TAM T

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,686

Applicant(s)

CRAFTS, DOUGLAS E. *DL*

Examiner

Thanh-Tam T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12, 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's submitted prior art (APA) in view of Bortolin et al. (5,037,179).

Regarding claims 7 and 12, APA, figures 1-3, discloses a method of aligning a fiber optic bundle (40) with an array waveguide (42) comprising inserting pins (22) into holes formed in fiber optic bundle, the holes formed in the fiber optic bundle are formed by placing two etched substrate (16 and 18) together, finely aligning optical fibers in the fiber optic bundle with channels of the array waveguide and permanently bonding the fiber optic bundle to the array waveguide.

APA discloses the instant claimed invention as described above except for inserting pins into holes formed in both the fiber optic bundle and the array waveguide.

Bortolin et al., figures 1 and 17, disclose two guide pins (10) are inserted into holes (9) of connectors (1 and 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide APA to have guide pins as taught by Bortolin et al., in order to connect and align two connectors together.

Regarding claims 8 and 14, APA discloses he permanently bonding the fiber optic bundle to the array waveguide further comprising an epoxy to bond the fiber optic bundle to the array waveguide.

Regarding claim 9, APA discloses an optical gel (50) between the fiber optic bundle and the array waveguide.

Regarding claim 10, APA discloses the optical gel has an index of refraction substantially similar to channels in the array waveguide.

Regarding claim 11, APA discloses curing the epoxy while maintaining alignment between the optical fibers and the channels of the array waveguide.

Regarding claim 15, the epoxy is performed by dispensing an epoxy having an index of refraction substantially similar to the channels of the array waveguide.

3. Claims 16-17 rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Bortolin et al. as applied to claims 7 and 12 above, and further in view of Cannon, Jr. et al. (4,973,127).

APA and Bortolin et al. disclose the instant claimed invention as described above except for the multiple holes are filled by optical fibers except for the holes with the pins inserted in them.

Cannon, Jr. et al., figure 5, disclose an optical connector having an array of fiber grooves (60a-71a) and pin grooves (80a, 81a) which read on the multiple holes are filled by optical fibers except for the holes with the pins inserted in them. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify APA and Bortolin et al. to have the array of fiber grooves and pin grooves as taught by Cannon, Jr. et al., in order to hold and to align the connectors with each other.

Response to Arguments

4. Applicant's arguments with respect to claims 7 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is (703) 306-5711. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (703) 308-2710. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Any correspondence to this action may be mailed to:

Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

For additional information regarding this new address, which was effective May 1, 2003, see Correspondence with the United States Patent and Trademark Office, 68

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Fed. Reg. 14332 (March 25, 2003).

Or faxed to: 703-308-7722 or 308-7724 (informal or draft communications should be clearly labeled "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

Crystal Plaza 4, Fourth Floor (receptionist)
2201 South Clark Place, Arlington, Virginia



JAVOID H. NASRI
PRIMARY EXAMINER

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